



# AMSR/AMSR-E Data Processing Status at JAXA/EOC

*Joint AMSR Science Team Meeting  
August 3 – 4 , 2004  
Colorado State University, Foothill Campus.*

**Makoto IMANAKA & Takeshi Maruyama**  
*Imanaka.Makoto@jaxa.jp & Maruyama.Takeshi@jaxa.jp*

*Earth Observation Center (EOC) &  
Earth Observation Research & Application Center (EORC)  
Japan Aerospace Exploration Agency (JAXA)*



# Outline

## 1. JAXA/EOC Data Processing System Status

- AMSR-E Data Latency

## 2. AMSR/AMSR-E Data Release Schedule

- Level 1 product version-up & re-processing schedule
- Higher level product version-up & re-processing schedule

## 3. Summary



# 1. JAXA/EOC AMSR-E Data Processing System Status

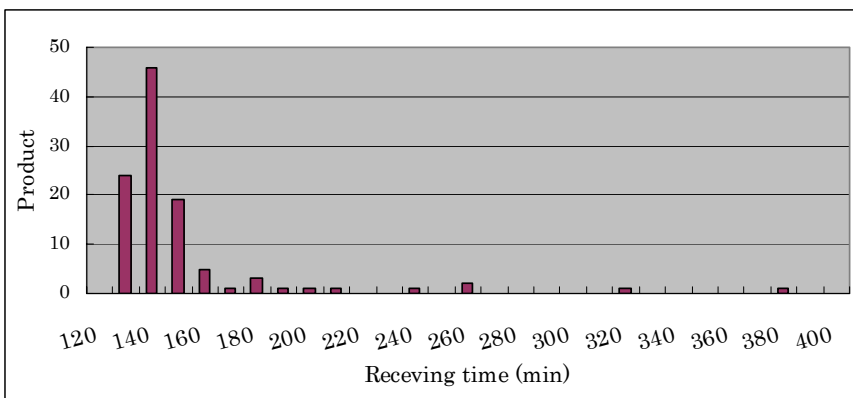
## AMSR-E Data Latency

- Number of data receipt (As of July 26, 2004)**

No.	Data Type	Receiving number
1	Science_RBD	11,195
2	GBAD_RBD	11,715
3	Science_PDS	1,760
4	GBAD_PDS	2,013

- AMSR-E RBD Data Latency (As of July 26, 2004)**

Observation Date	2004							Average
	July 20	July 21	July 22	July 23	July 24	July 25	July 26	
Number of product	15	14	15	14	15	14	15	
Average time (min)	154 min	152 min	236 min	145 min	145 min	139 min	156 min	162 min



This value shows time to the RBD data receipt with JAXA/EOC from the observation start with the sensor.

( Reference )

The average time on Aug, 2003 was 156 min.

The average time on Jun, 2004 was 149 min

**AMSR-E Level 0 data receipt is normal.**



## 2. AMSR/AMSR-E Data Release Schedule



## 2. AMSR/AMSR-E Data Release Schedule

### AMSR-E Level 1 product version-up

- Released AMSR-E Level 1 Products ( version 1.0 ) on June 28, 2003.
- Plan to version-up of the Level 1 Product on January, 2005.

#### AMSR-E Level 1 Product Version History

Release Date	AMSR-E Level 1 Product
June 28, 2003	Version 1.0
<b>January, 2005</b>	<b>Version 2.0</b>

The applicable items in the version 2.0

- CSM data correction will be installed in the next version.
  - CSM data correction for the electric wave interference of the geostationary satellite will be applied.
  - CSM data correction for the sun stray will be applied.
- The geometric correction algorithm by using empirical formula will be installed.  
[Discuss this issue in tomorrow's working lunch.](#)
- Level 1 product format will be changed in the next version.
  - Draft version of the level 1A product format description document has already delivered.
- ***We will provide the sample level 1 products to U.S Team at the end of Aug, 2004.***



## 2. AMSR/AMSR-E Data Release Schedule

### AMSR-E Higher-Level products version-up

- Released AMSR-E Higher Level Products on September 19, 2003.
- Released AMSR-E Higher Level Products on March 12, 2004.
- Plan to version-up of the higher-level Products on January, 2005.

#### AMSR-E Higher Level Products Version History

	September 19, 2003	March 12, 2004	January, 2005
Water Vapor (WV)	Version 1.0	Version 2.0	Version 3.0
Cloud Liquid Water (CLW)	-	Version 2.0	Version 3.0
Amount of Precipitation (AP)	Version 1.0	Version 2.0	Version 3.0
Sea Surface Wind (SSW)	Version 1.0	Version 2.0	Version 3.0
Sea Surface Temperature (SST)	Version 1.0	Version 2.0	Version 3.0
Snow Water Equivalent (SWE)	-	Version 2.0	Version 3.0
Sea Ice Concentration (IC)	Version 1.0	Version 2.0	Version 3.0
Soil Moisture (SM)	-	Version 2.0	Version 3.0



## 2. AMSR/AMSR-E Data Release Schedule

### AMSR-E Reprocessing Schedule

Items	2003												2004												2005									
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	
Level 1 Product						▲	Level 1 Release (06/19)																											
Higher Level Product									▲	High Level Release (09/18)																								

Notice: This is a current schedule. It may be changed.

- AMSR-E Observation Data ( about 20 months : (from June 1, 2002 to January 31, 2005) )
  - AMSR-E Level 1 Product : take about 7 months
  - AMSR-E Higher Level Product : take about 8 months



## 2. AMSR/AMSR-E Data Release Schedule

### Shipping Schedule for AMSR-E Reprocessing products

Working Day		Observation Period		Shipping Date (Plan)
01 Feb, 2005	10 Feb, 2005	01 Jun, 2002	31 Jul, 2002	17 Feb, 2005
12 Feb, 2005	21 Feb, 2005	01 Aug, 2002	30 Sep, 2002	28 Feb, 2005
23 Feb, 2005	04 Mar, 2005	01 Oct, 2002	30 Nov, 2002	11 Mar, 2005
06 Mar, 2005	15 Mar, 2005	01 Dec, 2002	31 Jan, 2003	22 Mar, 2005
17 Mar, 2005	26 Mar, 2005	01 Feb, 2003	31 Mar, 2003	02 Apr, 2005
28 Mar, 2005	06 Apr, 2005	01 Apr, 2003	31 May, 2003	13 Apr, 2005
08 Apr, 2005	17 Apr, 2005	01 Jun, 2003	31 Jul, 2003	24 Apr, 2005
19 Apr, 2005	28 Apr, 2005	01 Aug, 2003	30 Sep, 2003	05 May, 2005
30 Apr, 2005	09 May, 2005	01 Oct, 2003	30 Nov, 2003	16 May, 2005
11 May, 2005	20 May, 2005	01 Dec, 2003	31 Jan, 2004	27 May, 2005
22 May, 2005	31 May, 2005	01 Feb, 2004	31 Mar, 2004	07 Jun, 2005
02 Jun, 2005	11 Jun, 2005	01 Apr, 2004	31 May, 2004	18 Jun, 2005
13 Jun, 2005	22 Jun, 2005	01 Jun, 2004	31 Jul, 2004	29 Jun, 2005
24 Jun, 2005	03 Jul, 2005	01 Aug, 2004	30 Sep, 2004	10 Jul, 2005
05 Jul, 2005	14 Jul, 2005	01 Oct, 2004	30 Nov, 2004	21 Jul, 2005
16 Jul, 2005	25 Jul, 2005	01 Dec, 2004	31 Jan, 2005	01 Aug, 2005

- JAXA/EOC will reprocess the past observation data for two months in about one week.
- After that, we will ship the reprocessing data to NASA/JPL by DLT.





## 2. AMSR/AMSR-E Data Release Schedule

### AMSR Level 1 product version-up

- Released AMSR Level 1 Products on December 24, 2003.
- Plan to update the Level 1 Product on January, 2005.

#### ADEOS-II/AMSR Level 1 Product Version History

	AMSR-E Level 1 Product	Remarks
December 24, 2003	Version 1.0	
<b>January, 2005</b>	<b>Version 2.0</b>	

The applicable items in the version 2.0

- CSM data correction will be installed in the next version.
  - CSM data correction for the electric wave interference of the geostationary satellite will be applied.
  - CSM data correction for the sun stray will be applied.
- The geometric correction algorithm by using empirical formula will be installed.
  - [Discuss this issue in tomorrow's working lunch.](#)
- Level 1 product format will be changed in the next version.
  - Draft version of the level 1A product format description document has already delivered.



## 2. AMSR/AMSR-E Data Release Schedule

### AMSR Higher-Level products version-up

- Released AMSR-E higher-level products on December 24, 2003.
- Plan to update higher-level products on January, 2005.

#### ADEOS-II/AMSR higher-level products Version History

	December 24, 2003	January, 2005
Water Vapor (WV)	Version 1.0	Version 2.0
Cloud Liquid Water (CLW)	Version 1.0	Version 2.0
Amount of Precipitation (AP)	Version 1.0	Version 2.0
Sea Surface Wind (SSW)	Version 1.0	Version 2.0
Sea Surface Temperature (SST)	Version 1.0	Version 2.0
Snow Water Equivalent (SWE)	Version 1.0	Version 2.0
Sea Ice Concentration (IC)	Version 1.0	Version 2.0
Soil Moisture (SM)	-	Version 2.0

- The Soil Moisture product will be released as version2.0 in this time.



Notice: This is a current schedule. It may be changed.

- 
- JAXA  
Japan Aerospace  
Exploration Agency



## 2. AMSR/AMSR-E Data Release Schedule

### Shipping Schedule for AMSR Reprocessing products

Working Day		Observation Period		Shipping Date (Plan)
01 Feb, 2005	08 Feb, 2005	01 Apr, 2003	31 May, 2003	15 Feb, 2005
10 Feb, 2005	17 Feb, 2005	01 Jun, 2003	31 Jul, 2003	24 Feb, 2005
19 Feb, 2005	26 Feb, 2005	01 Aug, 2003	30 Sep, 2003	05 Mar, 2005
28 Feb, 2005	07 Mar, 2005	01 Oct, 2003	24 Oct, 2003	14 Mar, 2005

- JAXA/EOC will reprocess the past observation data for two months in about one week.
- After that, we will ship the reprocessing data to NASA/JPL by DLT.



### 3. Summary

- ✓ AMSR-E Data Processing System at JAXA/EOC is working well.
- ✓ AMSR/AMSR-E Level1A product will be updated to version 2 on Jan, 2005.
- ✓ JAXA Level 2 new version will be released at the same timing of Level 1A version 2 release.



# Backup Slides



# AMSR/AMSR-E Calibration Status

## ➤ Radiometric Calibration

CSM Data Correction will be installed in the next version.

- The correction for the electric wave interference from the geo-stationary satellite will be applied.
- The correction for the sun stray will be applied.

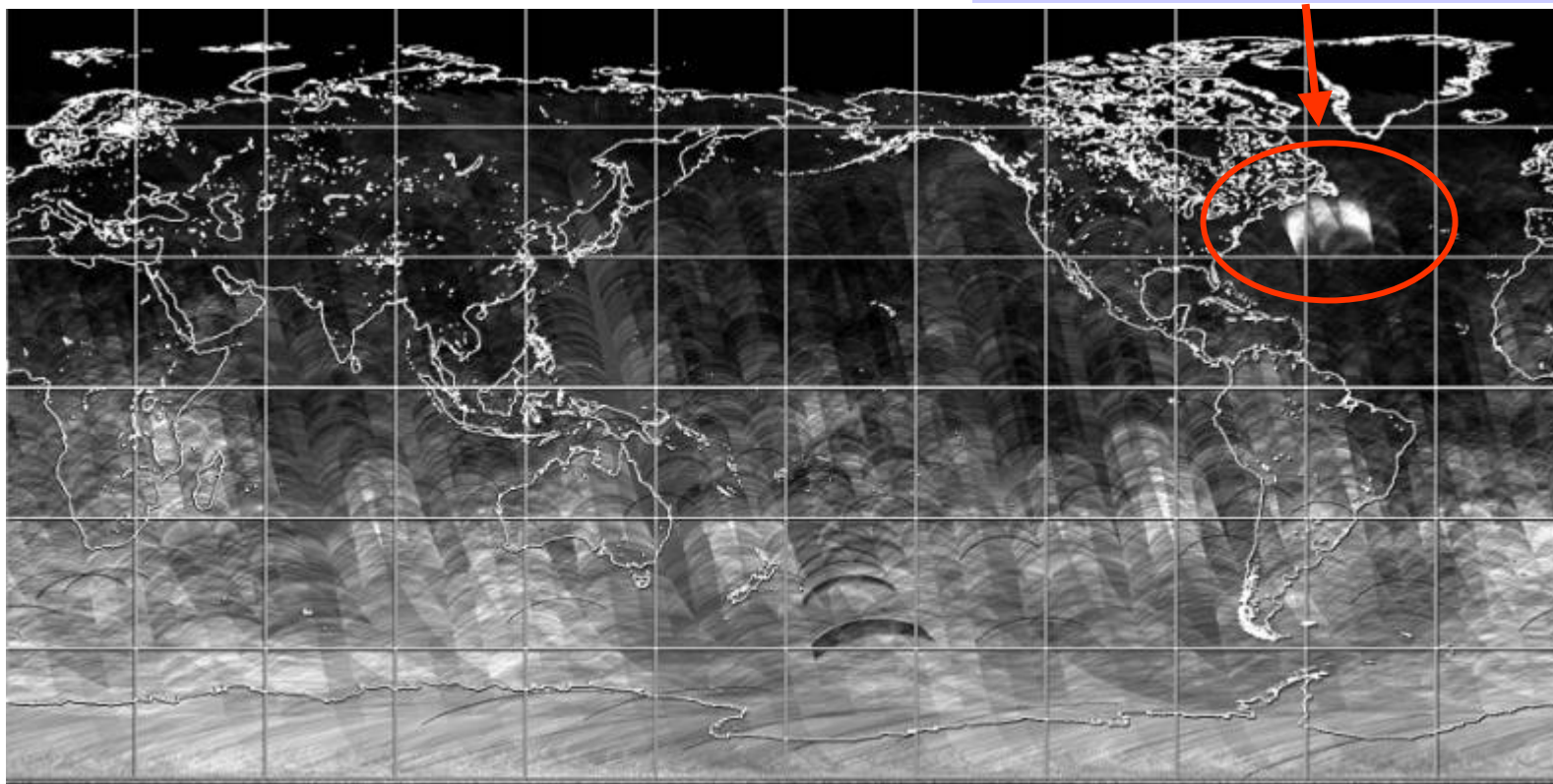


# AMSAR/AMSAR-E Calibration Status

## Radiometric Calibration

CSM Data Correction for the electric wave interference from the geo-stationary satellite

influence from geo-stationary satellite

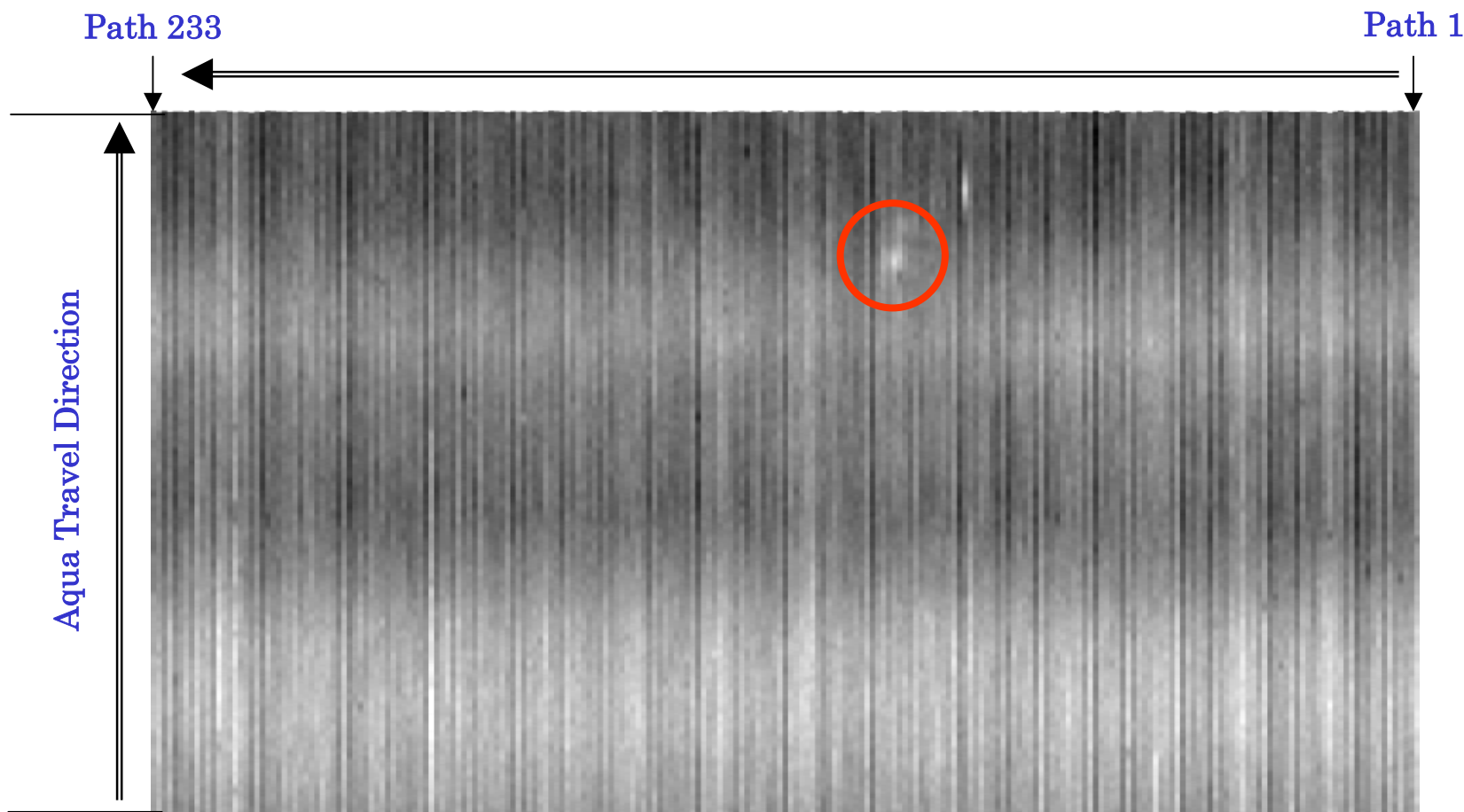






# AMSR/AMSR-E Calibration Status

## Radiometric Calibration (Cont.)

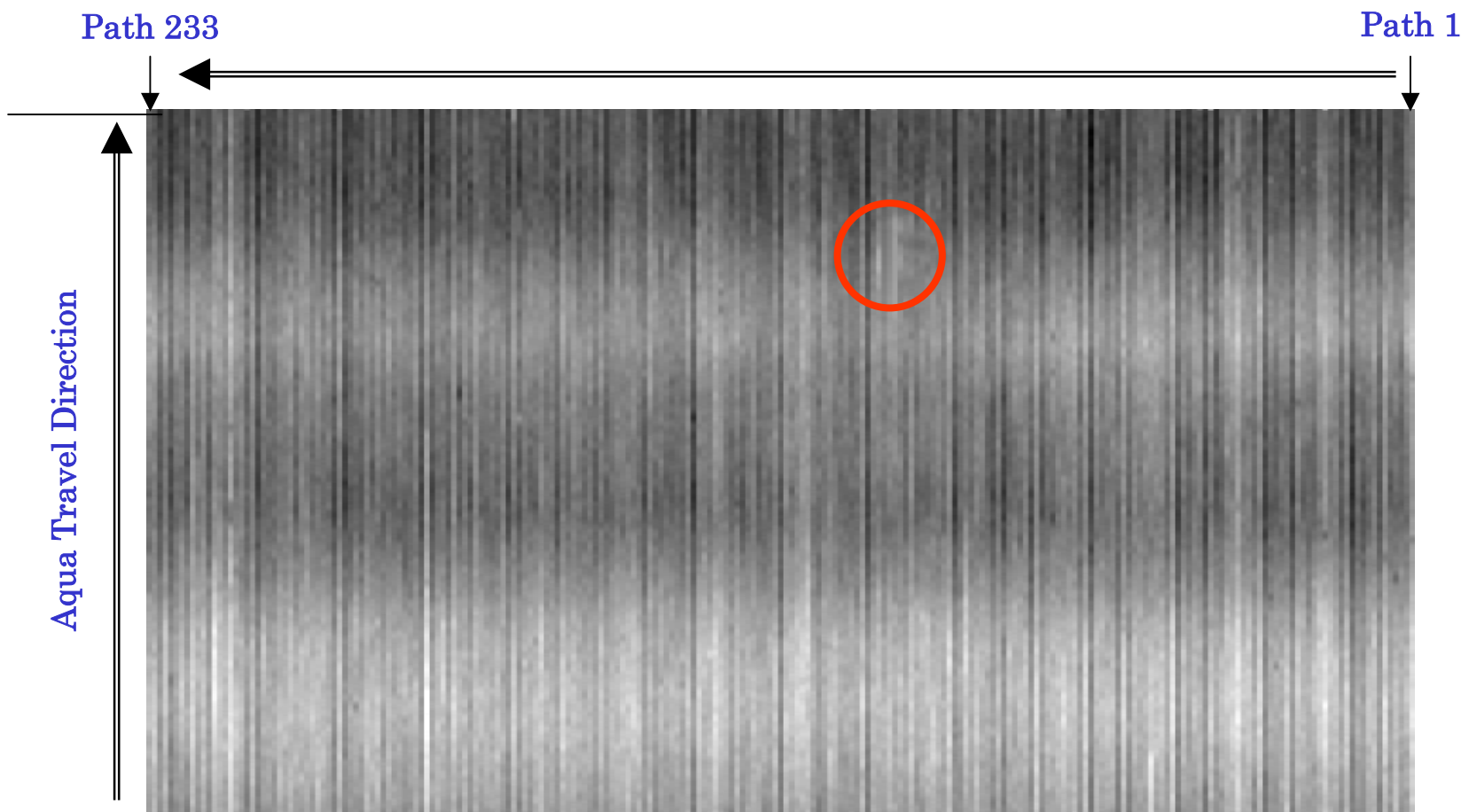


AMSR-E 10GHz H-Polarization Cold Sky Mirror(CSM) voltage (Before Correction)  
(Data Period : January 12<sup>th</sup>, 2004 – January 31<sup>st</sup>, 2004)



# AMSR/AMSR-E Calibration Status

## Radiometric Calibration (Cont.)



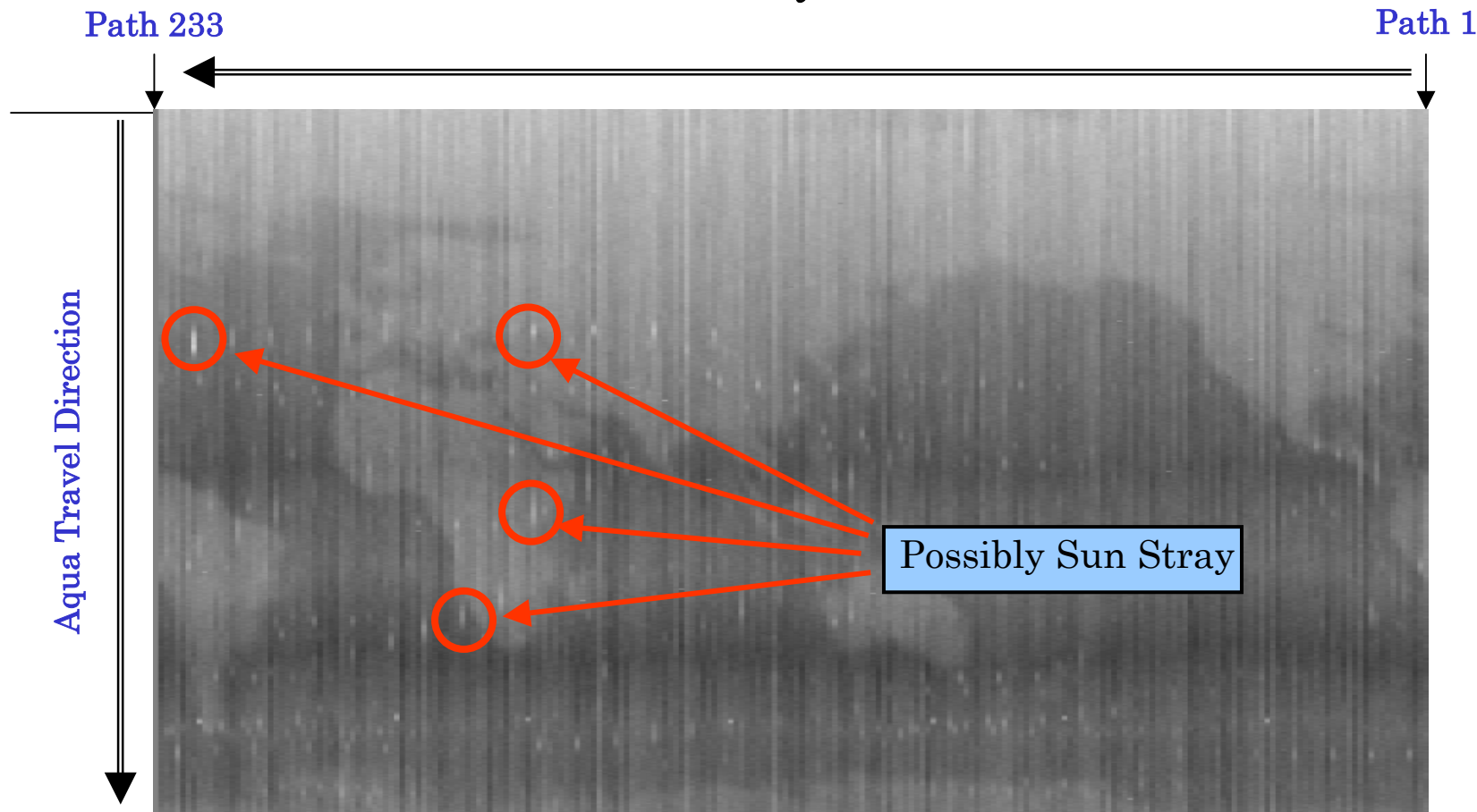
AMSR-E 10GHz H-Polarization Cold Sky Mirror(CSM) voltage (After Correction)  
(Data Period : January 12<sup>th</sup>, 2004 – January 31<sup>st</sup>, 2004)



# AMSR/AMSR-E Calibration Status

## Radiometric Calibration (Cont.)

### CSM Data Correction for the Sun Stray

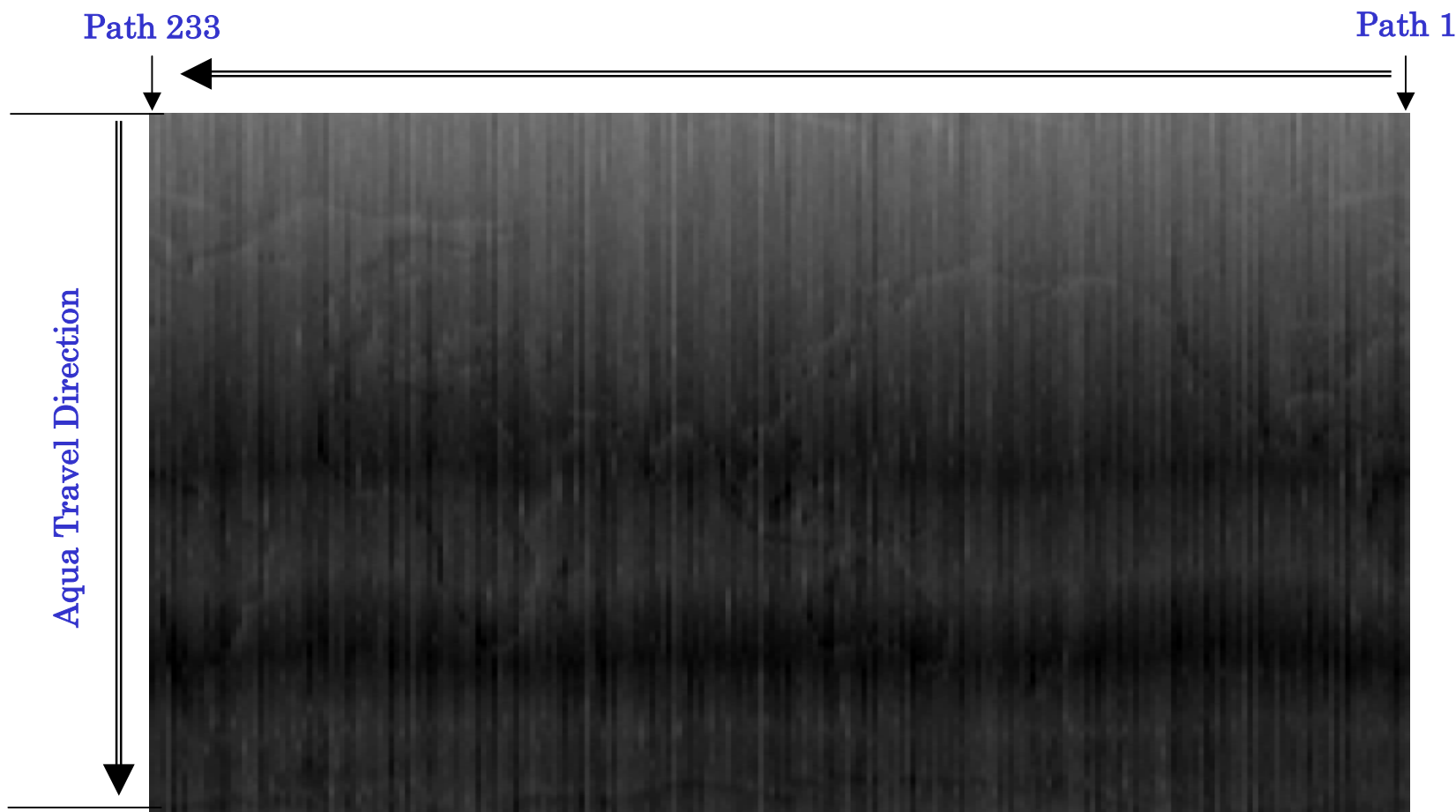


AMSR-E 6GHz V-Polarization Cold Sky Mirror(CSM) voltage (Before Correction)  
(Data Period : January 12<sup>th</sup>, 2004 – January 31<sup>st</sup>, 2004)



# AMSR/AMSR-E Calibration Status

## Radiometric Calibration (Cont.)



AMSR-E 6GHz V-Polarization Cold Sky Mirror(CSM) voltage (After Correction)  
(Data Period : January 12<sup>th</sup>, 2004 – January 31<sup>st</sup>, 2004)



# AMSR/AMSR-E Calibration Status

## CSM Calibration Summary

	ADEOS-II/AMSR & Aqua/AMSR-E	
1	Spillover of the Earth Radiation	Subtracted in Level 1 processing
2	Moon Contamination	Contamination of the Moon Reflection into the FOV of CSM ( 10-89GHz ) -> Interpoated in Level 1 processing
3	Constant RFI	10GHz ( H-polarization ) RFI from the geo-stationary satellite at around east shore of Canada. -> will be interpolated in Level 1 processing on next verion-up
4	Sun Stray	-> will be interpolated in Level 1 processing on next verion-up